

REPORTS on the MARINE BIOLOGY of the SUDANESE RED SEA, from Collections made by CYRIL CROSSLAND, M.A., B.Sc., F.L.S.—XVII. The ANOMURA. By W. RIDDELL, M.A. (Communicated by Prof. W. A. HERDMAN, F.R.S., F.L.S.)

[Read 17th December, 1908.]

THIS collection of Red Sea Anomura contains 17 species, representing 12 genera. None of the forms are new, but one or two are of some interest. It includes the first recorded female of *Cestopagurus coutieri*, Bouv., and I have also been able to add something to Nobili's description of *Galathea humilis*, Nob.

I have to thank Prof. Herdman, in whose laboratory most of the work was done, both for entrusting this collection to me for examination and for his kind help in connection with literature, and in many other ways.

Family Paguridæ.

Genus PAGURISTES.

PAGURISTES JOUSSEAUMI, *Bouv.*

(Bouvier, 3.)

This specimen is more or less intermediate between the varieties *glabra* and *intermedia*, being rather hairy but without well-developed spines. It belongs to this group, however, being distinguished from Nobili's variety *perspicax* (Nobili, 13) by the eye-stalks.

Suez flats, 1 specimen.

Genus CLIBANARIUS.

CLIBANARIUS CARNIFEX, *Heller.*

(Heller, 9; Bouvier, 3; Nobili, 13.)

Suakin Harbour, 3 specimens.

Genus CALCINUS.

CALCINUS LATENS (*Rand.*).

Pagurus latens, Randall, 13.

Calcinus latens, Dana, 5; Bouvier, 3; Alcock, 1; Nobili, 13, 14.

C. cristimanus, Heller, 9; Paulson, 17.

Engineer Island, Khor Dongola, 4 specimens; Mersa Arrikiya, 1 specimen,

Genus PAGURUS.

PAGURUS EUOPSIS, *Dana*.

P. euopsis, Dana, 5; Henderson, 10; Alcock, 1; Bouvier, 3; Nobili, 13, 14.

P. depressus, Heller, 9; Kossmann, 11.

Dardanus hellerii, Paulson, 17.

Suakin Harbour, 2 specimens; Agig Bay, 1 specimen; Mersa Wadi Lehana, 1 specimen.

PAGURUS TINCTOR (*Forsk.*).

Cancer tinctor, Forskål, 7.

Pagurus varipes, Heller, 9; Bouvier, 3; Alcock, 1.

P. tinctor, Nobili, 13, 14.

I follow Nobili's authority in changing the specific name, as I have been able to refer to Forskål's description.

Suakin harbour, 3 specimens; Mersa Arrikiya, 1 specimen; Mersa Makdah, S. el Shubuk, 8 specimens.

Genus EUPAGURUS.

EUPAGURUS (?) CAVICARPUS, *Pauls*.

(Paulson, 17; Nobili, 14.)

These specimens are rather doubtfully assigned to Paulson's species, as I have not been able to refer to his original figures. They agree in many ways with his description as given in Nobili's translation, and come nearer to it than to any other species of *Eupagurus*.

Suez flats, 5 specimens.

Genus CESTOPAGURUS.

CESTOPAGURUS COUTIERI, *Bouv.*

(Bouvier, 4.)

This species has not been recorded since 1897, when Bouvier created the genus and species for specimens from Djibouti. Alcock has described a second species from the Maldives.

Bouvier's specimens were all males. The present specimen is a female, bearing ova, with a carapace 3 mm. in length. It agrees fully with Bouvier's figures and description, except that the hair does not seem so pronounced.

Southern reef, Tella Tella Kebira, 1 specimen.

Genus CÆNOBITA.

CÆNOBITA RUGOSUS, *Edw.*

(Milne-Edwards, 12; Dana, 5; Alcock, 1.)

Tella Tella Kebira, 7 specimens.

Family Galatheidæ.

Genus GALATHEA.

GALATHEA ÆGYPTIACA, *Pauls.*

(Paulson, 17; Nobili, 14.)

Off Beacon Island, Khor Dongola, 13 specimens.

GALATHEA HUMILIS, *Nob.*

(Nobili, 14.)

The specimens described by Nobili were all in bad condition, no ambulatory legs being present. The present specimens are also in poor condition, but one has got the ambulatory legs present. The characters of the rostrum and carapace agree closely with the description and figure given by Nobili. The chelipedes seem rather more spiny.

Ambulatory legs. The dactylopodite has four (or possibly even five) teeth inferiorly, the largest next the claw. The propodite has four long spines inferiorly, one being almost on the distal border. The coxopodite has no spines, the meropodite has two on the inferior surface.

Off Beacon Island, Khor Dongola, 3 specimens in bad condition.

Family Porcellanidæ.

Genus PETROLISTHES.

PETROLISTHES BOSCI, *Aud.*

(Heller, 9; De Man, 6; Ortmann, 15 b; Nobili, 13.)

Tella Tella Kebira, 1 specimen, chelipeds missing.

PETROLISTHES LAMARCKI, *Leach.*

A full synonymy of this species and its varieties will be found in Borradaile (2). He has pointed out that *P. dentatus* and *P. rufescens* are only varieties of *P. lamarcki*. Ortmann (16) and Nobili (14) have also shown that there is great variation in this group of forms. The present forms belong mainly to the *dentatus* variety, but the *rufescens* variety is also

represented. The epibranchial spine, as Ortmann has shown, is very variable. In two specimens, otherwise alike, the epibranchial spine was absent in one, present in the other.

Suez mud flats, 11 specimens; among coral, Suez, 29; Tella Tella Kebira, 10; Suez Bay, 5; no locality given, 1.

PETROLISTHES LEPTOCHELES, Heller.

(Heller, 9; Nobili, 14.)

Coral, Suez, 2 specimens; coral, Suakin, 1; Suez flats, 2; Tella Tella Kebira, 1; Khor Dongola, 4; no locality given, 2.

Genus *POLYONYX*.

POLYONYX DENTICULATUS, Paulson.

(Paulson, 17; Nobili, 14.)

Suakin Harbour, 3 specimens; Suez Bay, 6; Engineer's Island, Khor Dongola, 6; "Among sponges, Jan. 11th, 1905," 88; washings from "bottle 44," 1.

POLYONYX BIUNGUICULATUS, Dana.

(Dana, 5.)

Beacon Island, Khor Dongola, 1 specimen.

Genus *PACHYCHELES*.

PACHYCHELES SCULPTUS, Edw.

(Milne-Edwards, 12; De Man, 6; Ortmann, 16; Nobili, 13.)

Tella Tella Kebira, 1 specimen.

Genus *PORCELLANA*.

PORCELLANA INÆQUALIS, Heller.

(Heller, 9; Nobili, 13, 14.)

According to Heller, the right cheliped is the larger; according to Nobili, the right generally, sometimes the left. In the present specimens the right, on the whole, is most often the smaller. They may be subequal. Nobili says that in his specimens the median lobe of the front was broadly rounded, and that none of them corresponded to Heller's figure, which represents the lobe as acute. In the present specimens this lobe is usually more or less acute, not so acute as Heller figures it, but more so than Nobili shows it.

Reef flat, Engineer Island, Khor Dongola, 54 specimens; Tella Tella Kebira, 53; off Beacon Island, Khor Dongola, 42.

